caBIG

cancer Biomedical Informatics Grid

caBIG CVS Users Guide

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Configuring PuTTY

1. Download PuTTY from http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html
2. Start PuTTY and enter sshuman host information

   Host name: sshuman.nci.nih.gov
   Port: 22 (the default for the SSH protocol)
   Protocol: SSH

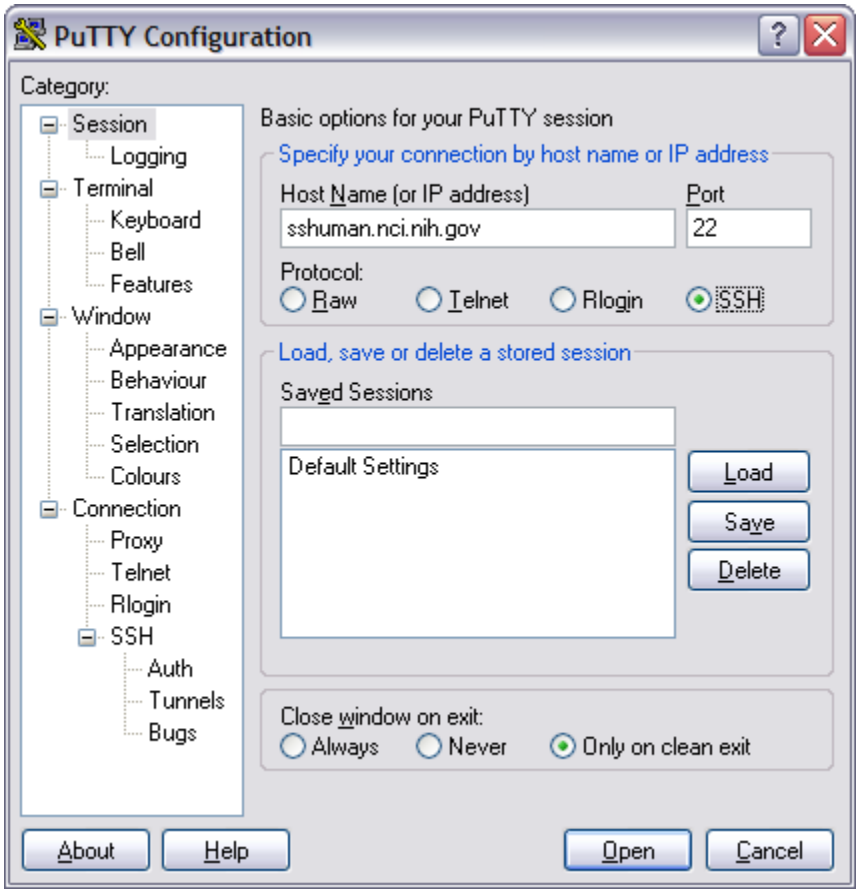


Figure 1 - Setting Host Name and Port

3. Select 'Tunnels' (under SSH) from the tree on the left. Map a local port on your machine to port 2401 on cbiocvs2.nci.nih.gov (2401 is the pserver port for cvs). The port can be any port that's not already being used. Note that if you are running behind a firewall, you may need to manually open up the port.

   Source Port: any open port on your local machine.
   Destination: cbiocvs2.nci.nih.gov:2401. **Enter this exactly**.
   Select Local.

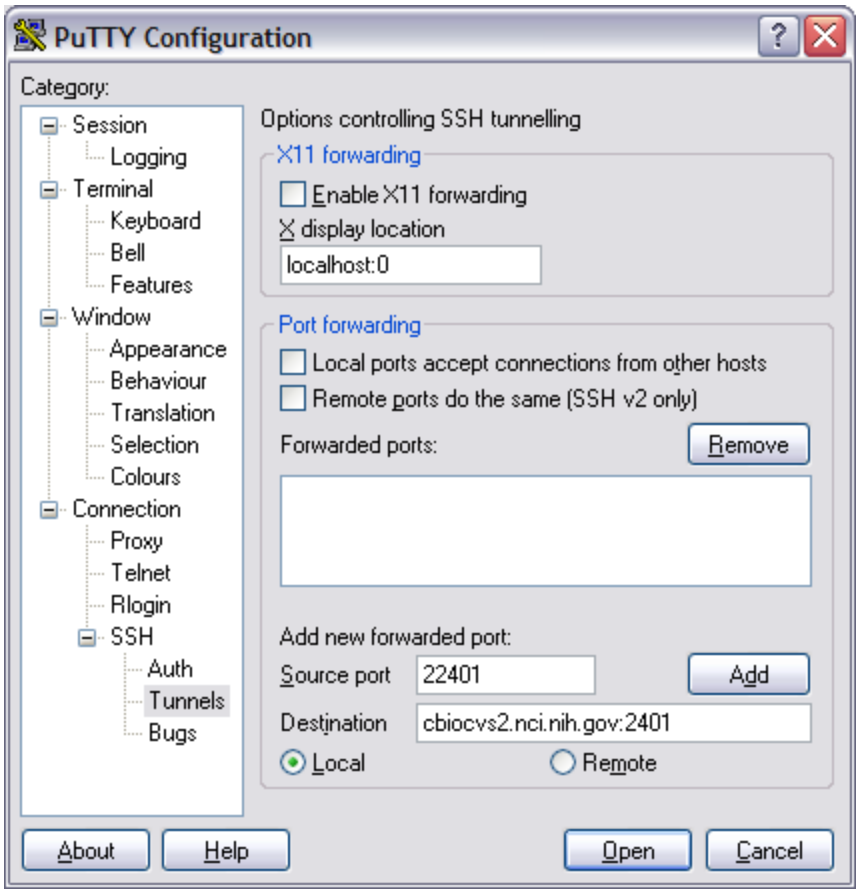


Figure 2 - Mapping a Local Port

4. Click 'Add'
5. You can save the session to restore later, so you won't need to go through these steps every time.
6. To reload a saved session, select it from the 'Saved Sessions' list, and click 'Load'

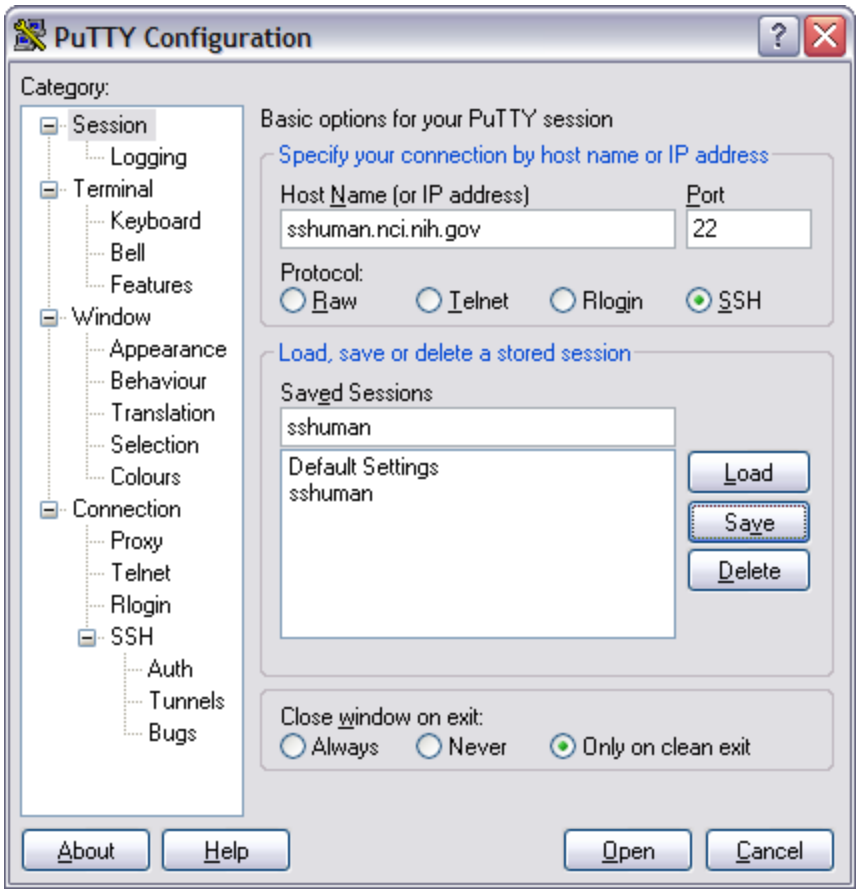


Figure 3 - Restoring a Saved Session

7. Click 'Open' to log on to sshuman with the supplied username/password.

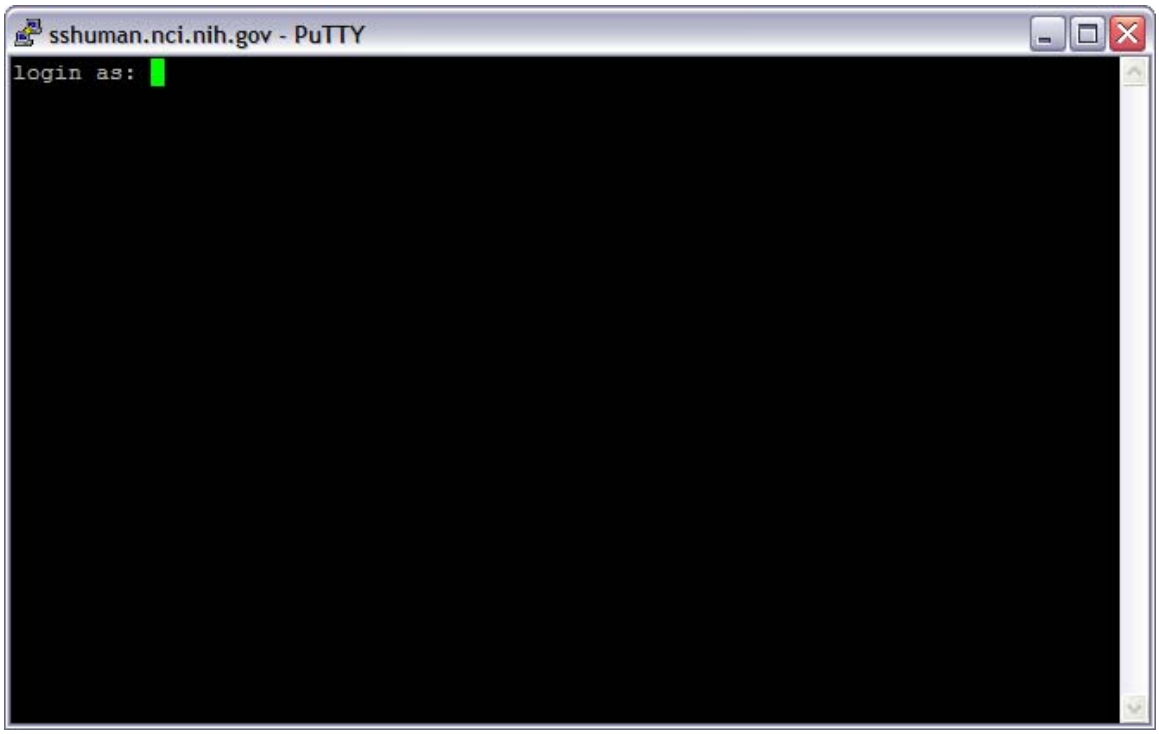


Figure 4 - Logging on to sshuman

8. With the cvs client of your choice, enter the following connection information:

   :pserver:<username>@localhost:22401:<path>

   Make sure the port specified here is the same as the port you entered in step 3. Path should be the path to the repository root on the server. Ask the NCICB SCM Administrator what you should put here.

9. These instructions have been tested with TortoiseCVS, WinCVS, Eclipse 3.0, and the Cygwin cvs command line client. Details for configuring these clients continues below.

Configuring and Using jCVS II

1. Download jCVS II 5.4.2 from http://www.jcvs.org/download.html
2. Extract zip file into a folder and double click /path/to/jCVS/bin/jcvsii.jar
    a. Assuming you have Java installed and properly configured, jCVS will start

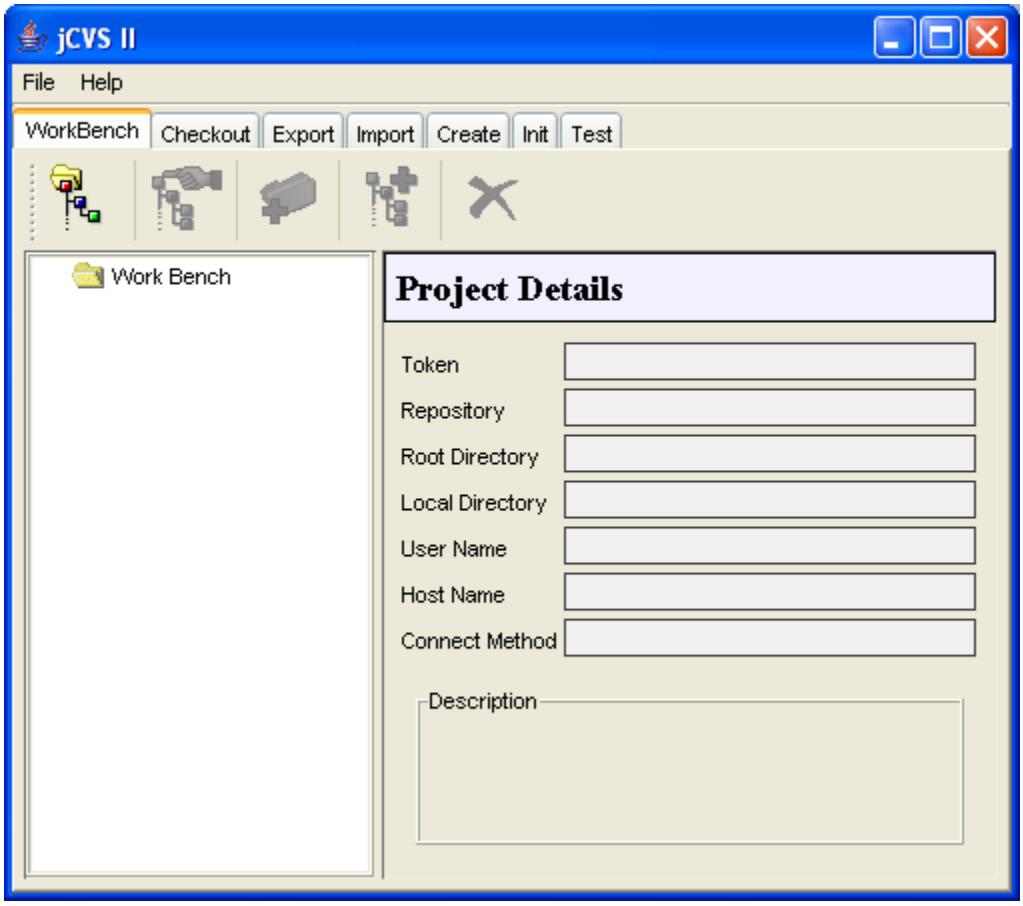


Figure 5 - jCVS Main Window

3. Set up preferences to connect to CVS through port 22401 on your local machine (according to the directions for tunneling to CVS, port 2401 on cbiocvs2.nci.nih.gov is mapped to port 22401 on your local machine).
    b. Go to File → Edit Preferences
    c. In the "Properties" window, expand the "Global" node and then the "Default Ports" node.

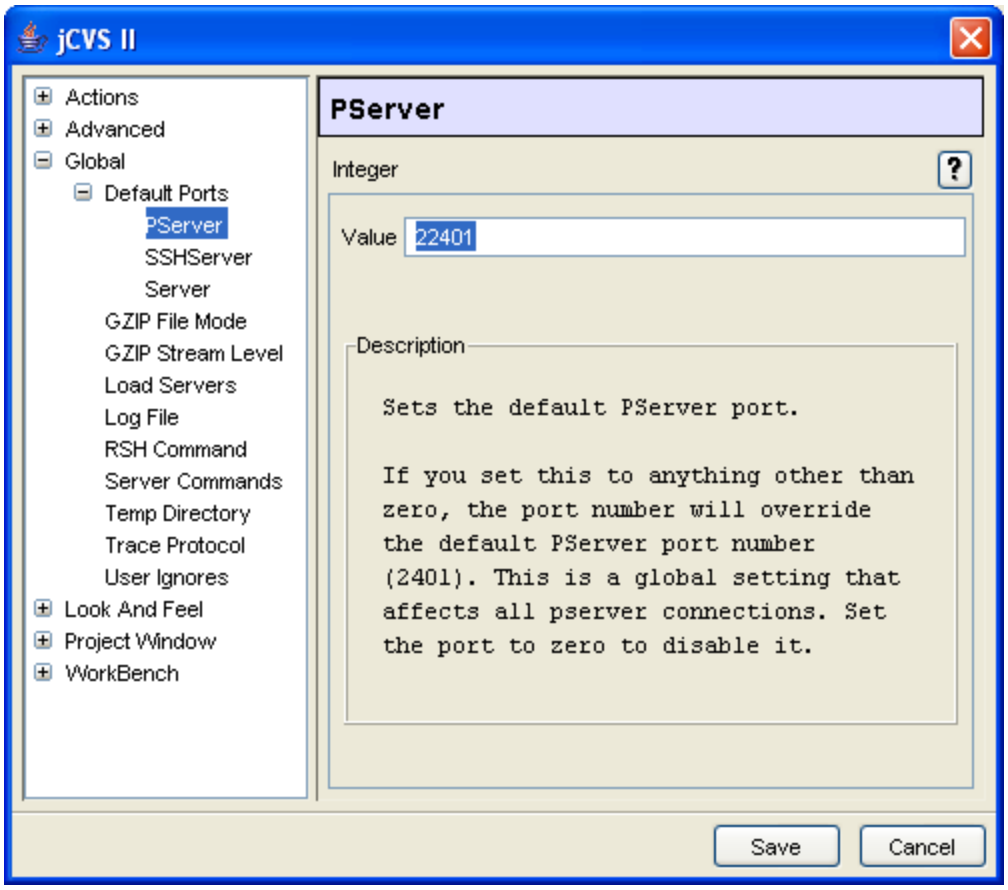


Figure 6 - Setting Default Port

d. Click on the "PServer" leaf under "Default Ports" and enter "22401" in the "Value" field. Save these settings.
e. You will also want to change the default "Temp Directory" to one that jCVS can find.

4. Your client should be ready to connect to the CVS server. Test the settings by clicking the "Test" tab in the main window.
   f. Click the "PServer" radio button and add your username and password.
   g. In the "CVS Server" field, enter "localhost" and in the "CVS Repository" field, enter "/share/content/cabig/cvsroot"
   h. Press the "Perform Test" button to verify a successful connection.

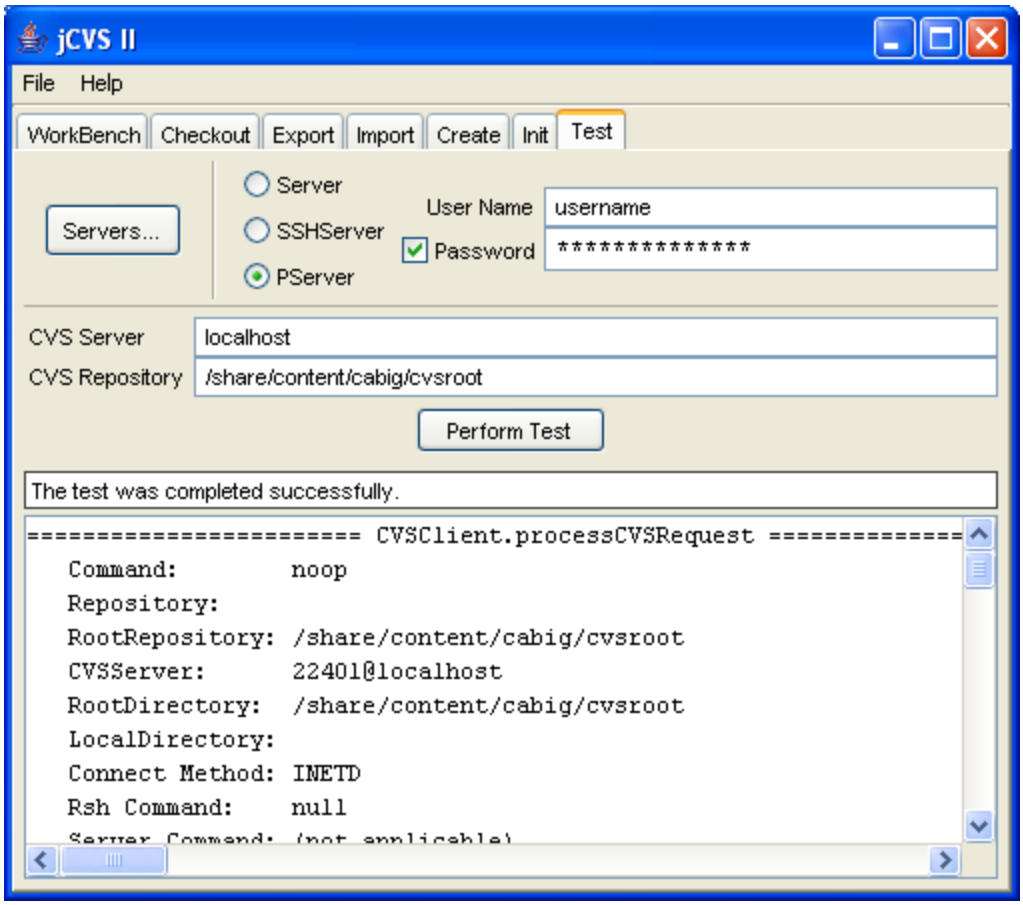


Figure 7 - Test Connection

i. If the test is successful, you are free to start using any of the other jCVS functions.
j. If the test failed, check the following attributes:
    i. Port "22401" was entered as the "PServer" port in the "Preferences"
    ii. The username and password are correct
    iii. The "CVS Server" and "CVS Repository" are correct
        1. CVS Server: localhost
        2. CVS Repository: /share/content/cabig/cvsroot
    iv. The ssh tunnel was properly established
k. If all of the instructions have been properly followed and you are still experiencing trouble, you may not have access to the repository. Check with the NCI to ensure you have been given access to the repository.

Importing with jCVS

Once Test indicates that you are successfully connected to the CVS server click on the "Import" tab.

1. Enter your "User Name"
2. Enter your "Password"
3. "CVS Module" is the path name that identifies the CVS module on the CVS server in which you will import the deliverable. If you are importing a monthly deliverable the CVS module will reflect the Cancer Center name. If you are importing a software deliverable the CVS module will reflect the project name.
4. CVS Server – This is the hostname of theCVS server. Enter "localhost"

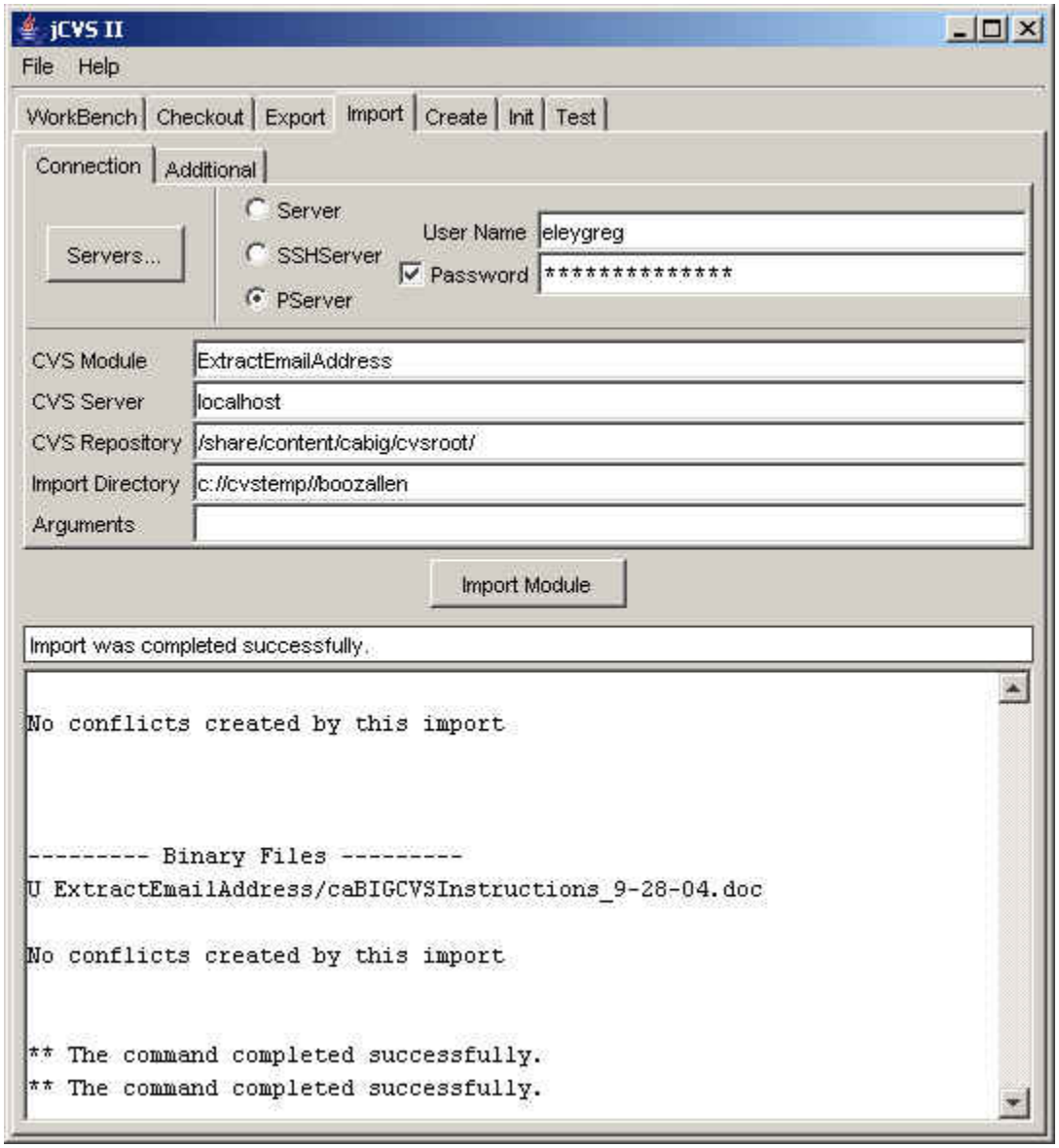


Figure 8 - Import Files Connection

5. CVS Repository – This is the full path name of the repository you wish to access. Enter "/share/content/cabig/cvsroot/"
6. Import Directory – This is the full pathname of the local import directory. The imported files will be read from this directory. Enter the complete path to the directory in which the deliverable

resides on your local drive.
(Note - in this example the file was stored on the C: drive of the desktop Windows system and jCVS requires the double forward slash (//) to recognize the path.)

7. Arguments – Place any arguments for the CVS import command in this field.
8. Now click on the "Additional" tab.

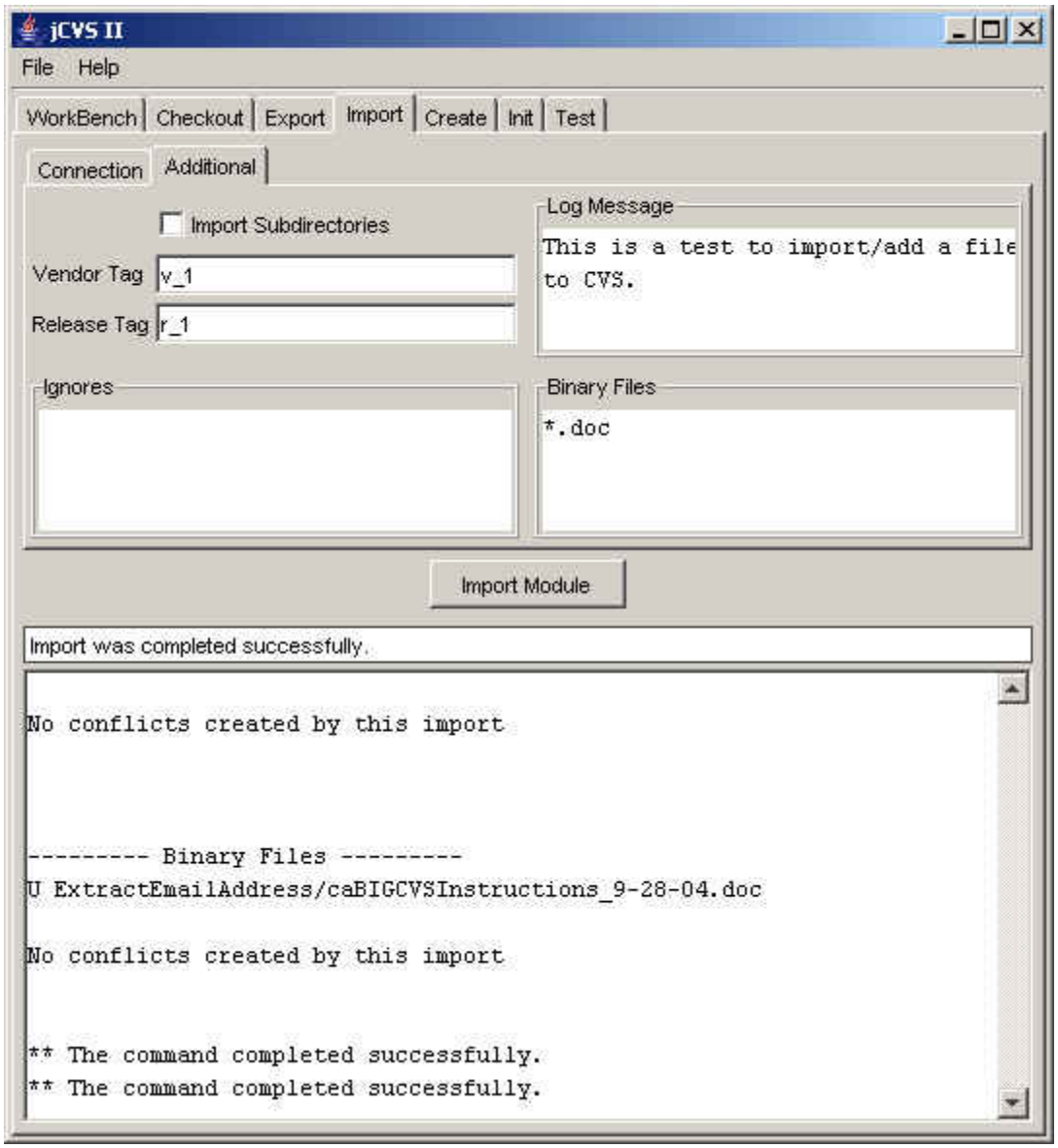


Figure 9 - Additional Import Parameters

9. Import Subdirectories – If checked, subdirectories will also be imported.
10. Vendor Tag – Enter the "vendor tag" that is be applied to the import branch.
11. Release Tag – Enter the "release tag" that is to be applied to the imported files.
12. Log Message – The log message that will be recorded with the imported files.
13. Ignores – This is a CVS ignore spec to the default ignore spec
14. Binary files – This field is another "ignore spec" except that in this case every file that matches the spec will be treated as a BINARY file, and imported into the repository with the '-kb' flag. This will allow you to check in both text and binary files in one operation.

Checkout Project with jCVS

The “Checkout Panel” is used to checkout a project from the CVS server. Checkout is the only way to create a local working directory, or project in jCVS terminology.

1. “CVS Module” – This is the path name that identifies the CVS module that you want to checkout from the server.
2. “CVS Server” – Host name of the CVS Server
3. “CVS Repostitory” – Full path name of the repository you want to access.
4. “Checkout Directory” – Full pathname of the local checkout directory. The checked out files will be written to this directory. If the directory does not exist it will be created after your confirmation.
   (Note – in this example the checkout directory is on the C: drive of a Windows system therefore jCVS requires the double forward slashes.)
5. "Arguments” – place any arguments for the CVS checkout command in this field. E.g. if you want to checkout a specific revision you would place the ‘-r rev’ option in this field.

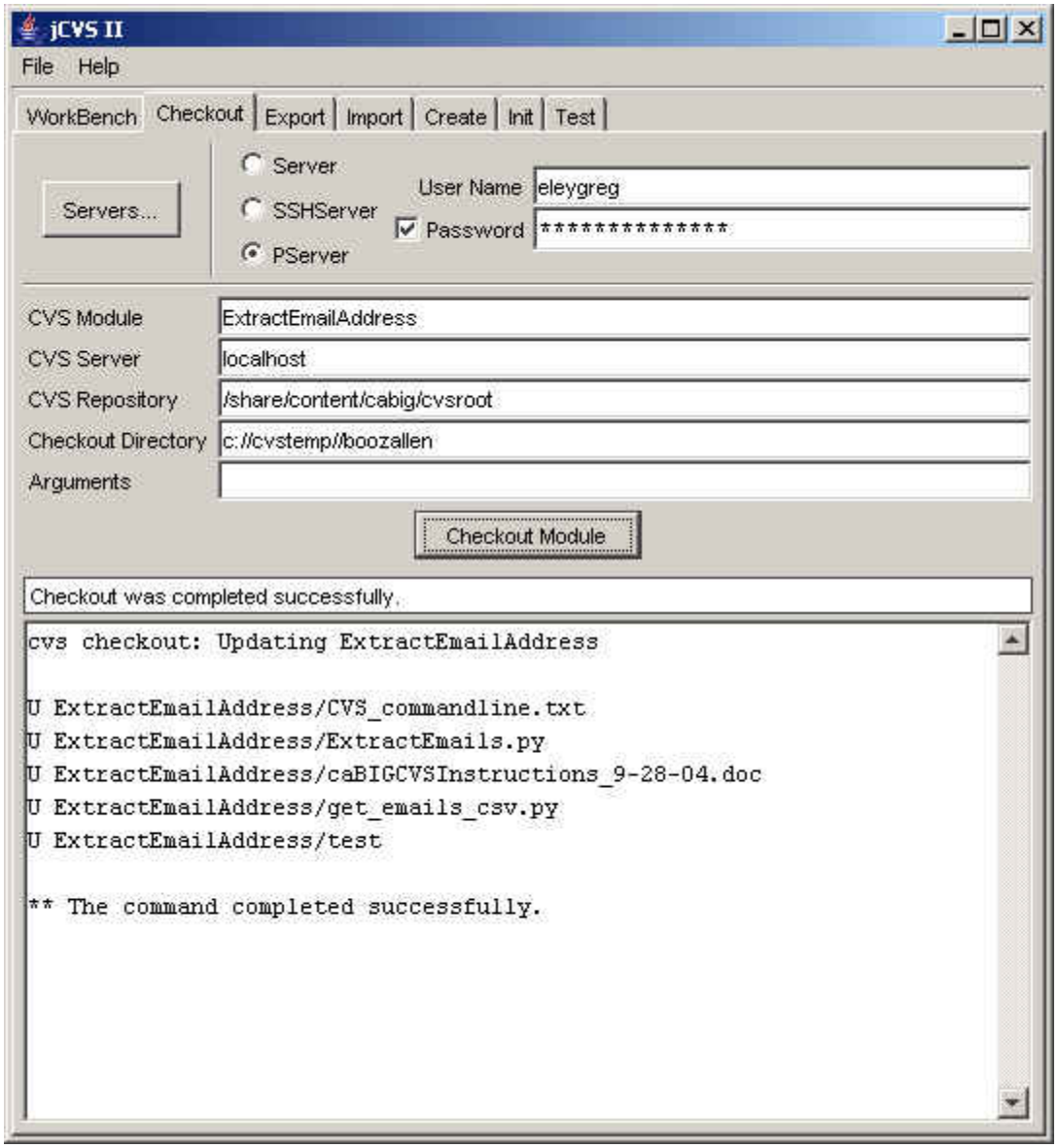


Figure 10 - Checkout Files

6. Click on "Checkout Module"
7. In this example we successfully checked out the "ExtractEmailAddress" module and files to the C:/cvstemp/boozallen directory on the Windows-based desktop system.

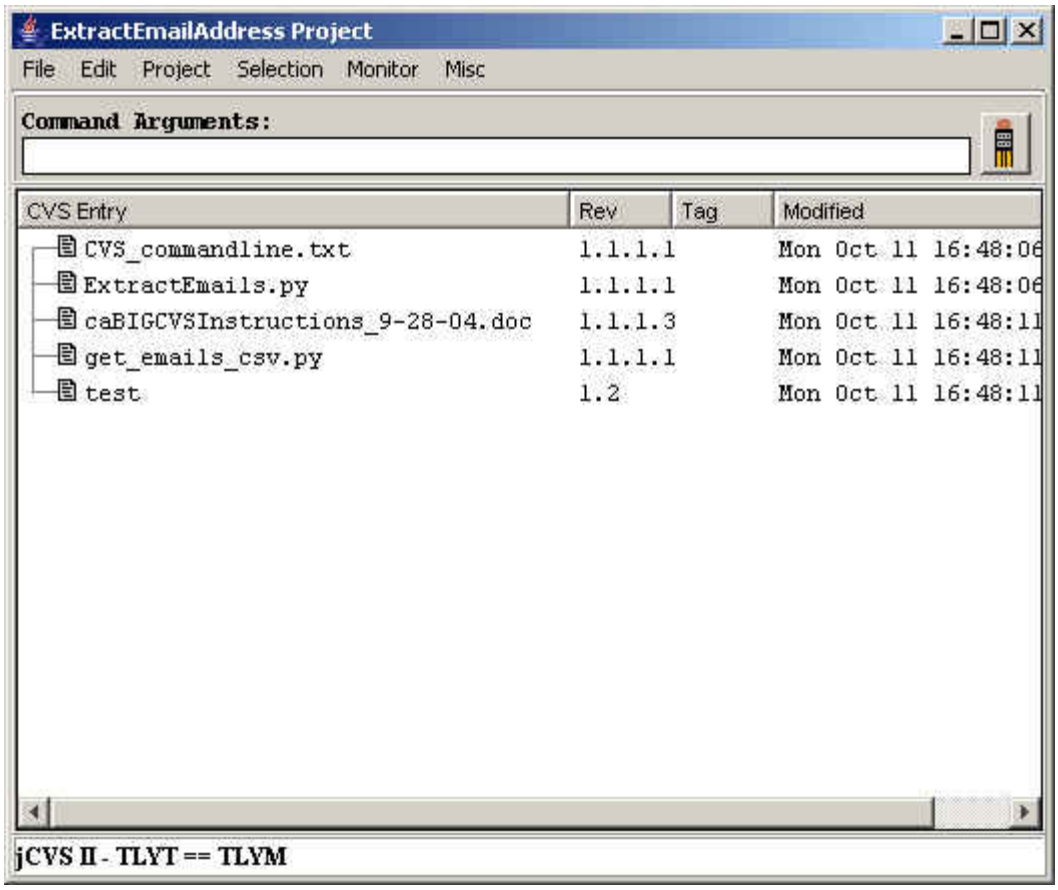


Figure 11 - Checkout Files Commands

8. We are now ready to work on the project in a local location and perform subsequent commands such as “update” and “commit” as project files are revised.

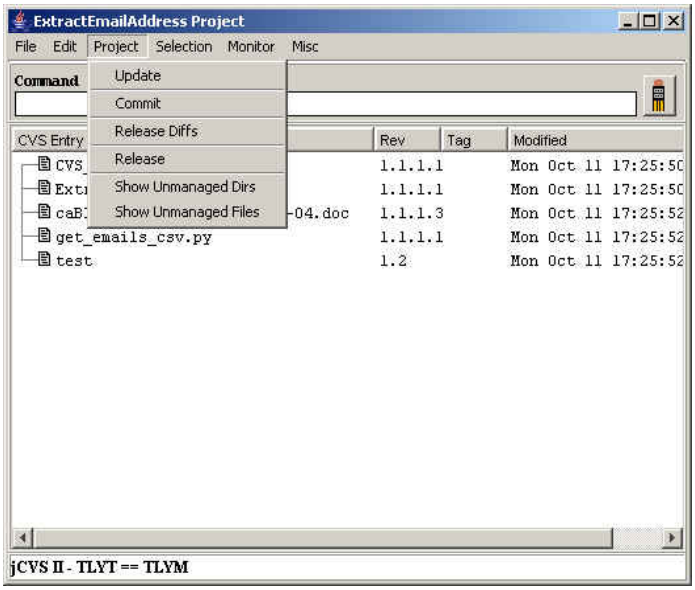


Figure 12 - Command Example 1

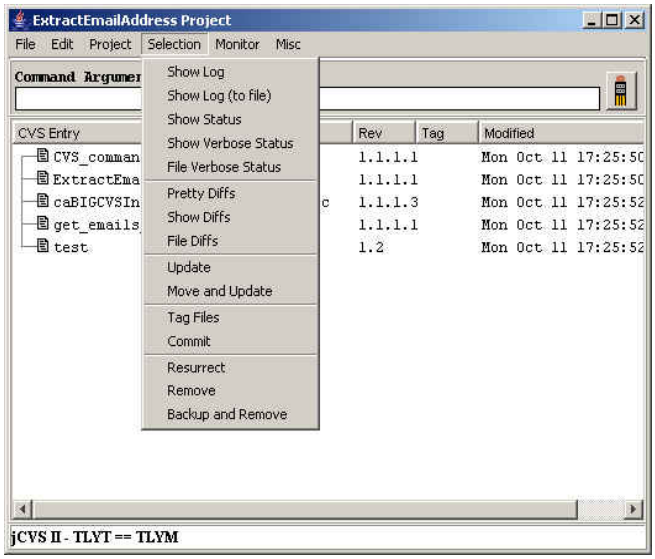


Figure 13 - Command Example 2

Exporting with jCVS

The Export Panel is used to export a module from a CVS server to a local disk.Typically used to create a release that will be imported by another CVS site. Also used to export the source files for a specific release build

1. "CVS Module" – This is the path name that identifies the CVS module that you want to checkout from the server.
2. "CVS Server" – Host name of the CVS Server
3. "CVS Repository" – Full path name of the repository you want to access.
4. "Checkout Directory" – Full pathname of the local checkout directory. The checked out files will be written to this directory. If the directory does not exist it will be created after your confirmation.
   (Note – in this example the checkout directory is on the C: drive of a Windows system therefore jCVS requires the double forward slashes.)
5. "Arguments" – place any arguments for the CVS checkout command in this field. E.g. if you want to checkout a specific revision you would place the '-r rev' option in this field.
6. Click on "Export Module"

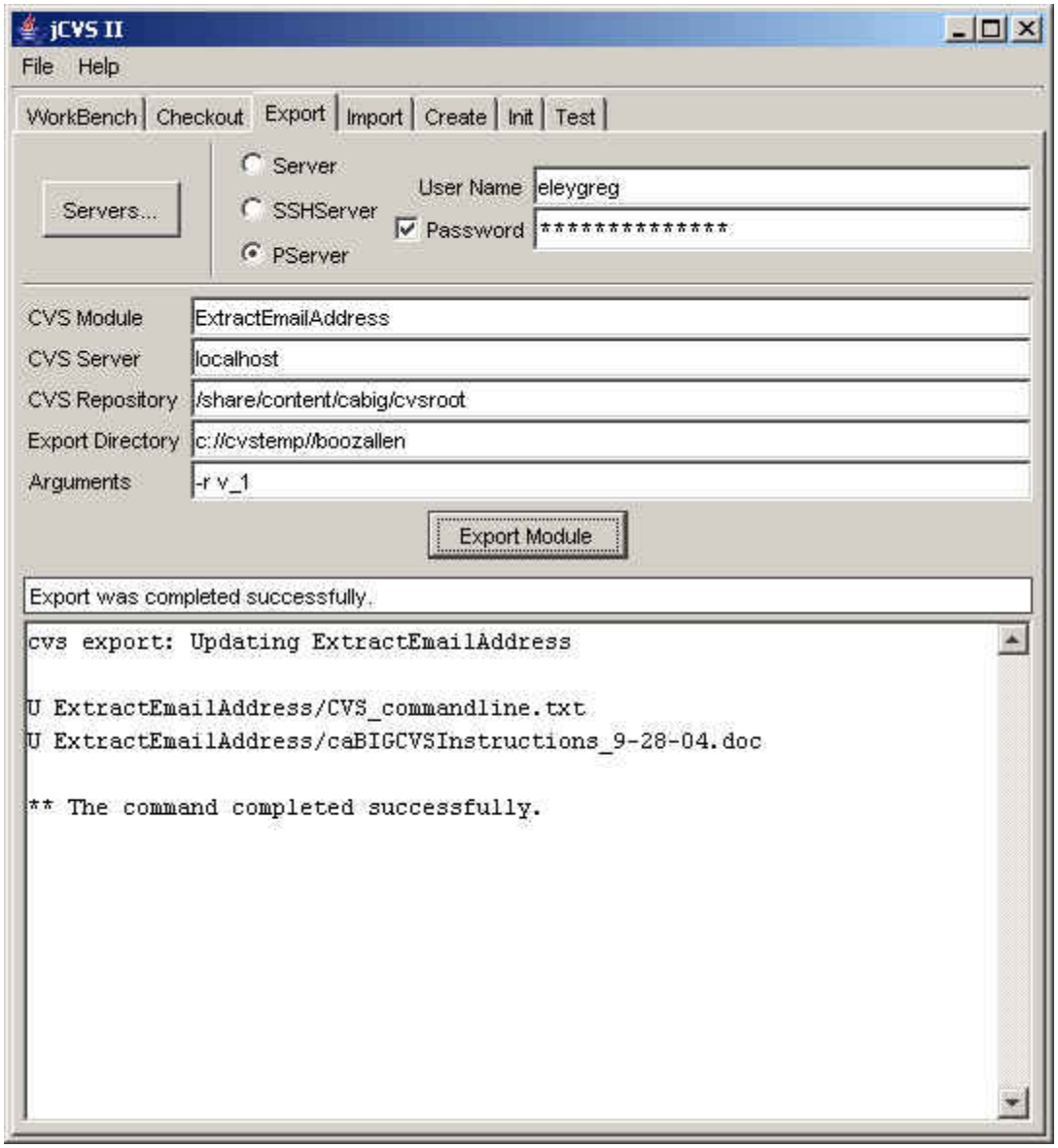


Figure 14 - Export Files Panel

7. In this example we successfully exported the "ExtractEmailAddress" module and files to the C:/cvstemp/boozallen directory on the Windows-based desktop system.

Viewing Files Through HTML

The contents of CVS can be viewed and accessed via HTML at the following URL:
http://cabigcvs.nci.nih.gov/viewcvs/viewcvs.cgi/

Enter the URL in your browser and hit enter. You will be presented with the following caBIG Initiative page

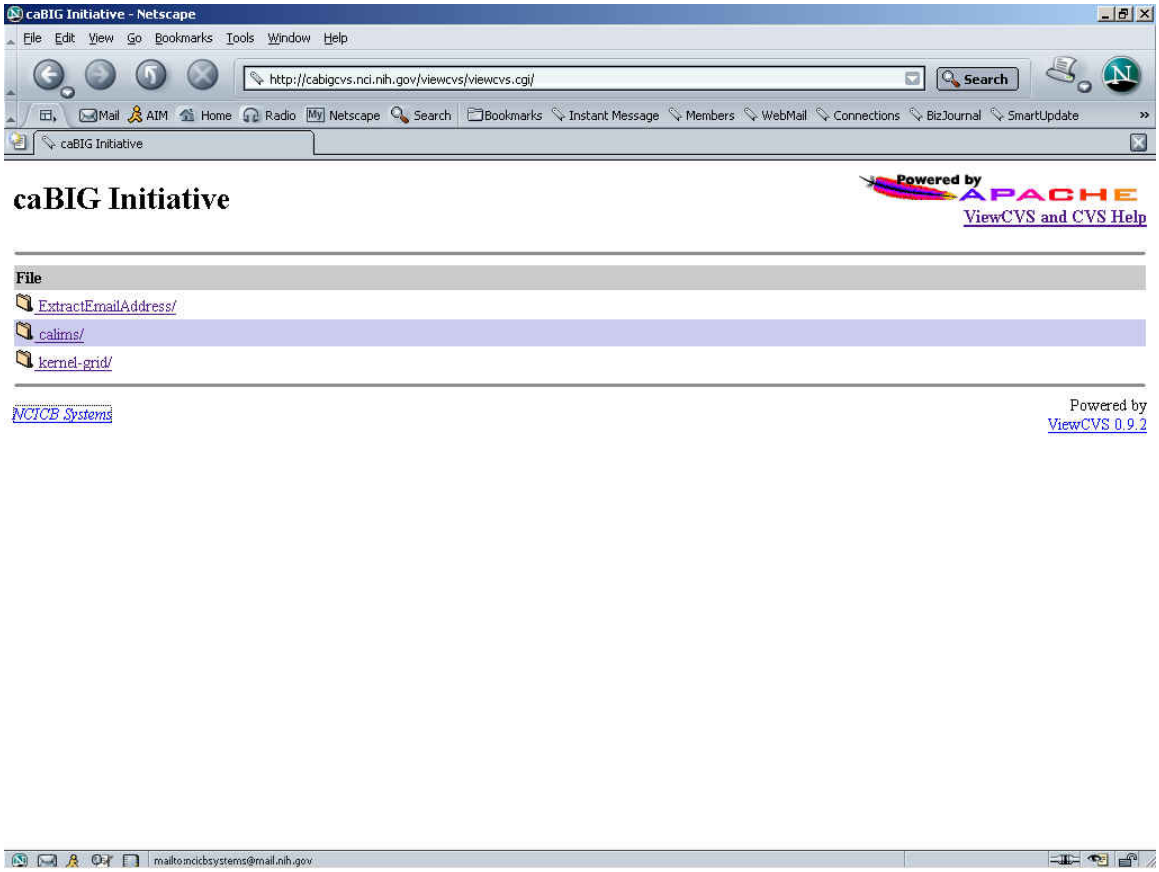


Figure 15 - CVS URL and Main Page

At this level each entry under File represents a directory or project in CVS.
Click on a project link to view the files within the project

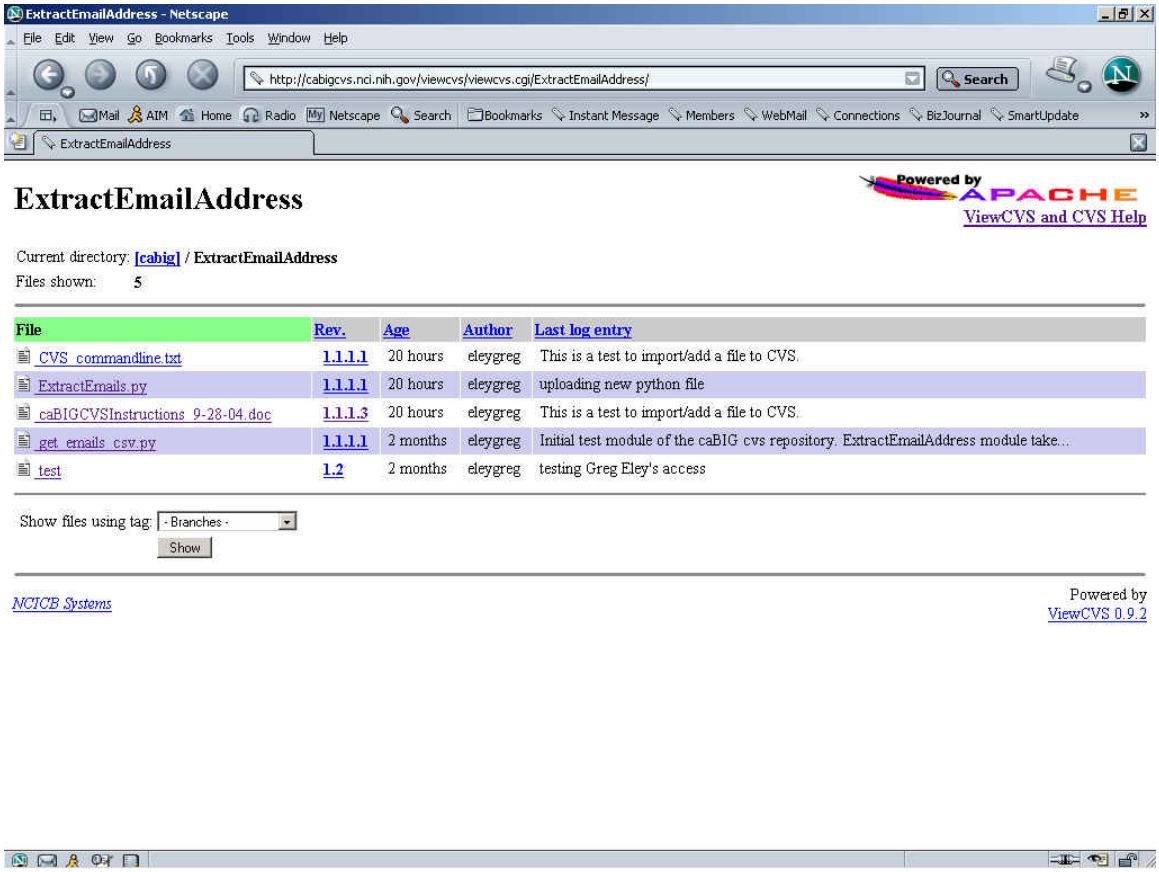


Figure 16 - File Contents of Project

In this example you will observe five files within the ExtractEmailAddress project with the associated Revision, Age of the file, the login ID of the Author, and the Last log entry.
Clicking on one of the files will allow you to view detailed CVS versioning and file revision information

By clicking on the file “caBIGCVSInstructions.doc” you will presented with the “CVS log” page for that file. This page lists the entire revision history for the caBIGCVSInstructionss.doc file.

Figure 17 - Cumulative File Revision History

For text files you may view the contents of the file by clicking on the "download" link. Upon clicking "download" another window will open up and display the contents of the text file.

However, for "binary" files such as Word, Excel, Powerpoint, and Adobe Acrobat files that will be stored in CVS you will not click on the "Download" link. To properly review a binary file you must download it to your local machine.

First, return to the previous page.
Then right click on the file you wish to download.
Select the "Save Link Target as…" option from the pop up window and follow the prompts to store the file in the desired location on your local machine. Remember where you saved the file.
Once saved on your local machine you will use the native application to open the file for viewing

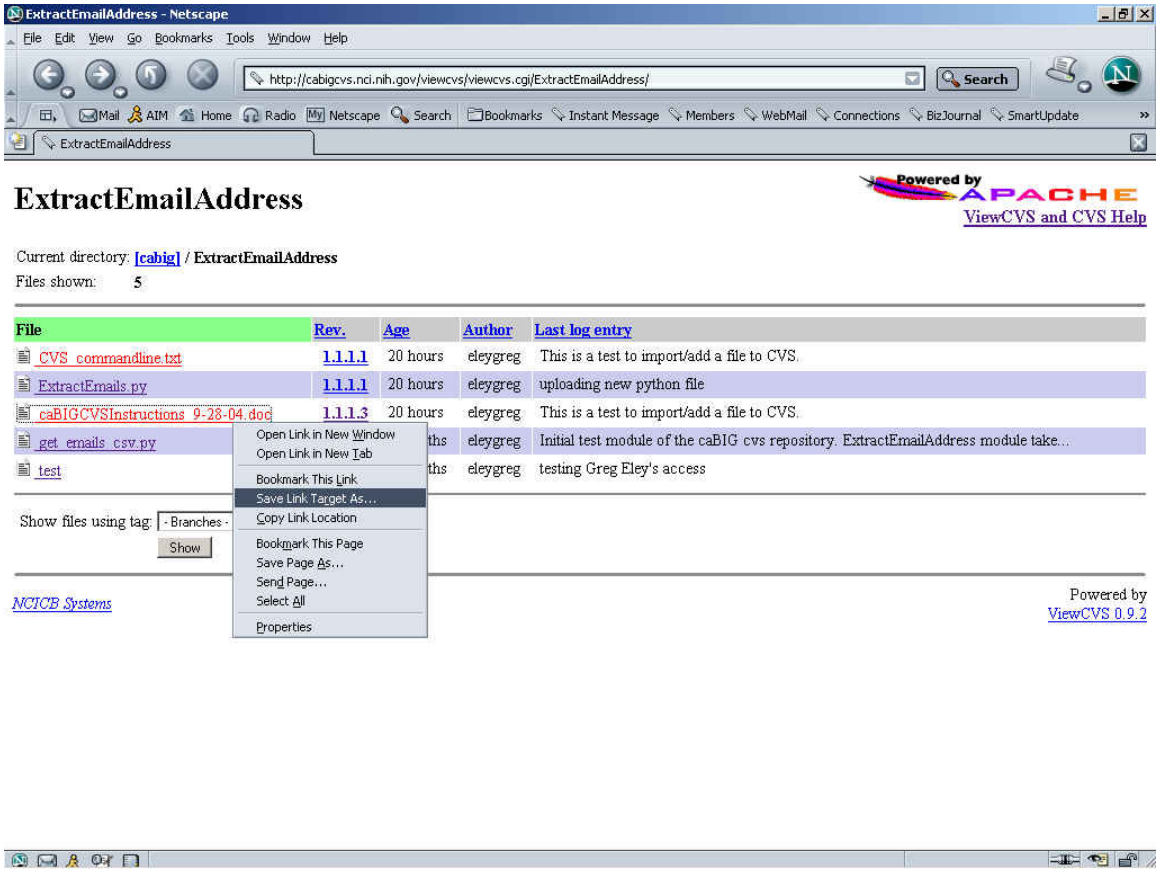


Figure 18 - Downloading a Binary File

Changing Passwords

On sshuman.nci.nih.gov

Connect to sshuman.nci.nih.gov with PuTTY as previously described
Login to sshuman.nci.nih.gov with login ID and password

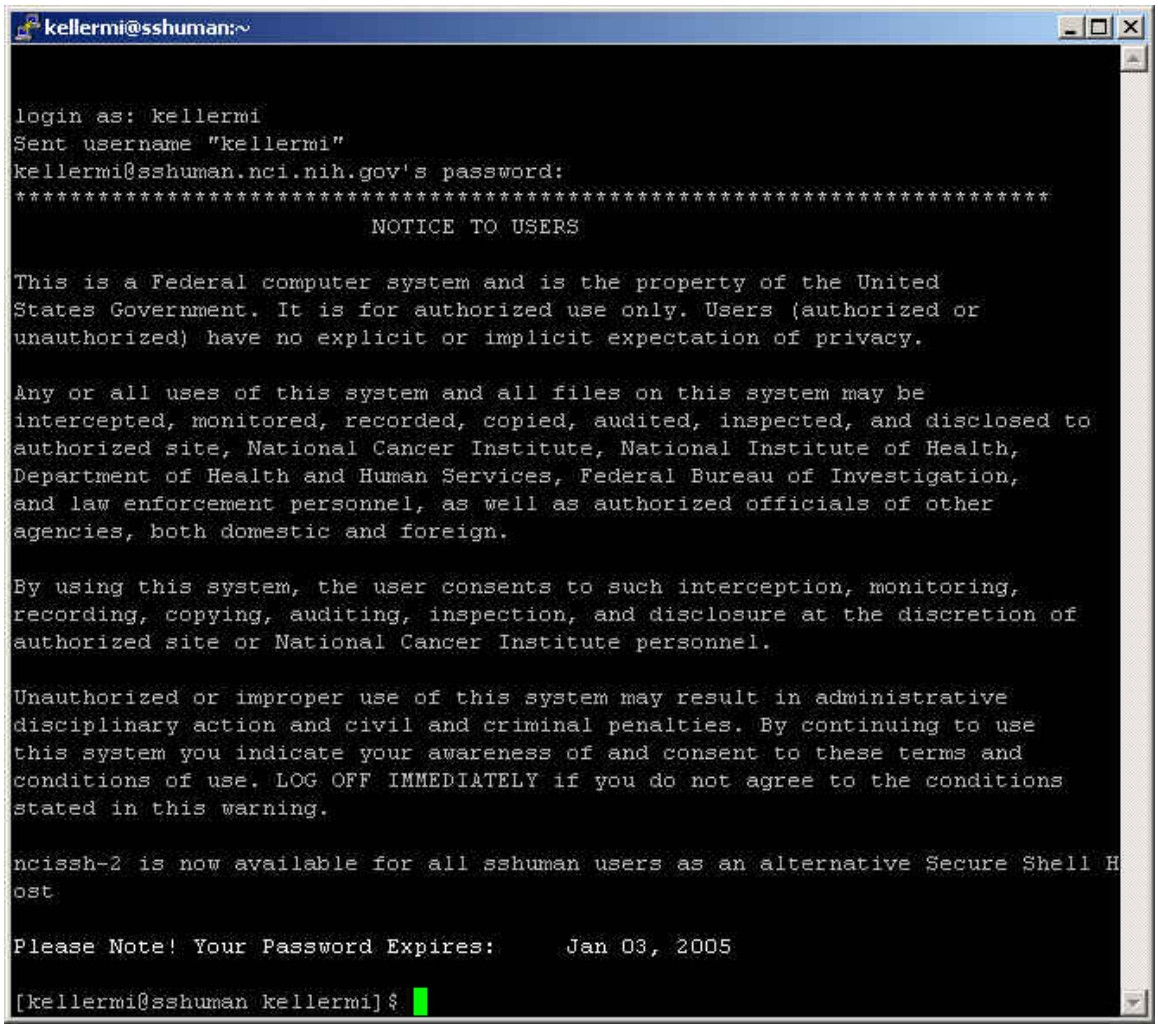


Figure 19 - Connecting to sshuman.nci.nih.gov

Type in “passwd” command, hit enter key and follow prompts

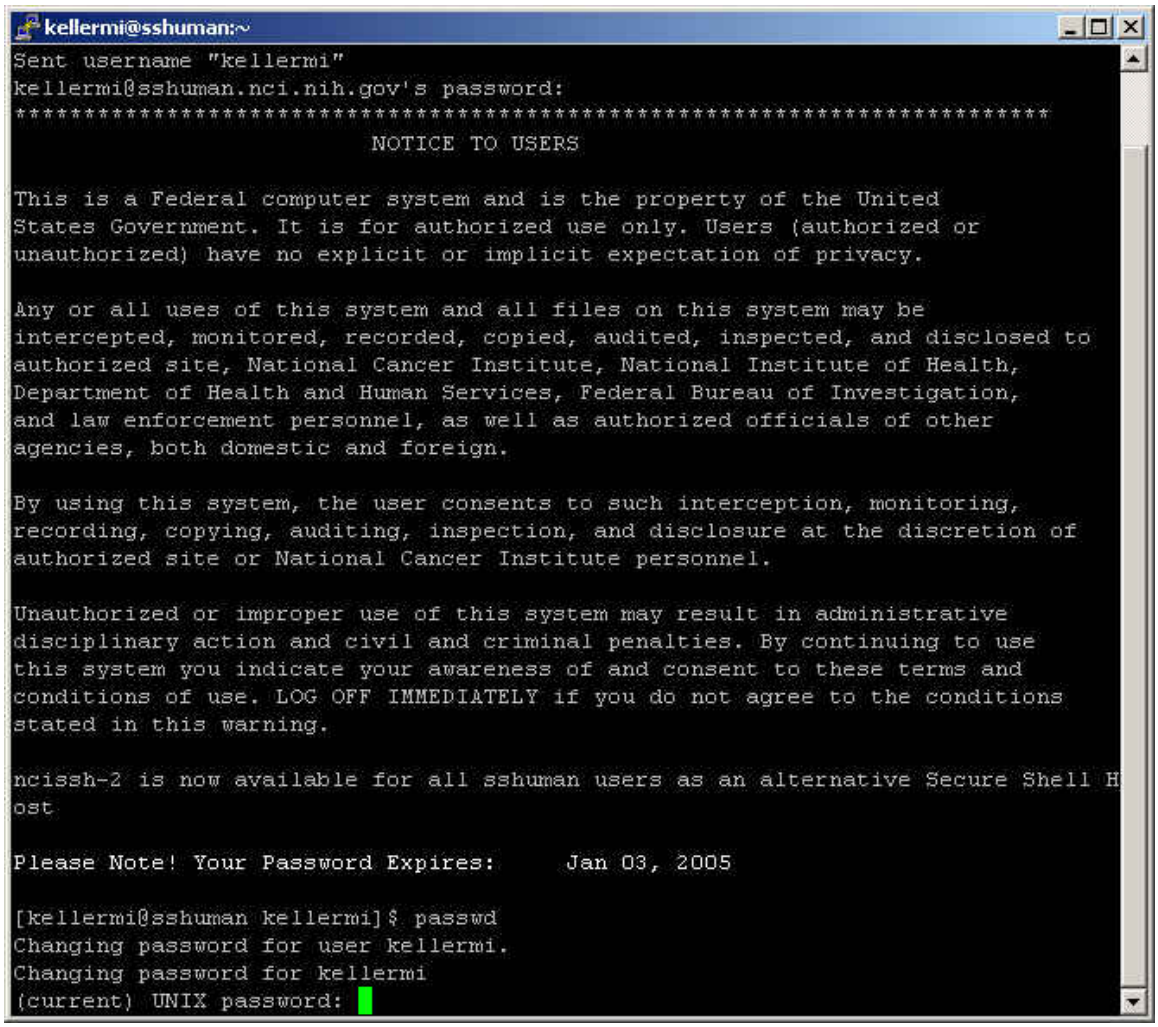


Figure 20 - Change password on sshuman

On cbiocvs2.nci.nih.gov

From the command line enter the following ssh command to connect to the cbiocvs2.nci.nih.gov server:
ssh –l <username> cbiocvs2.nci.nih.gov

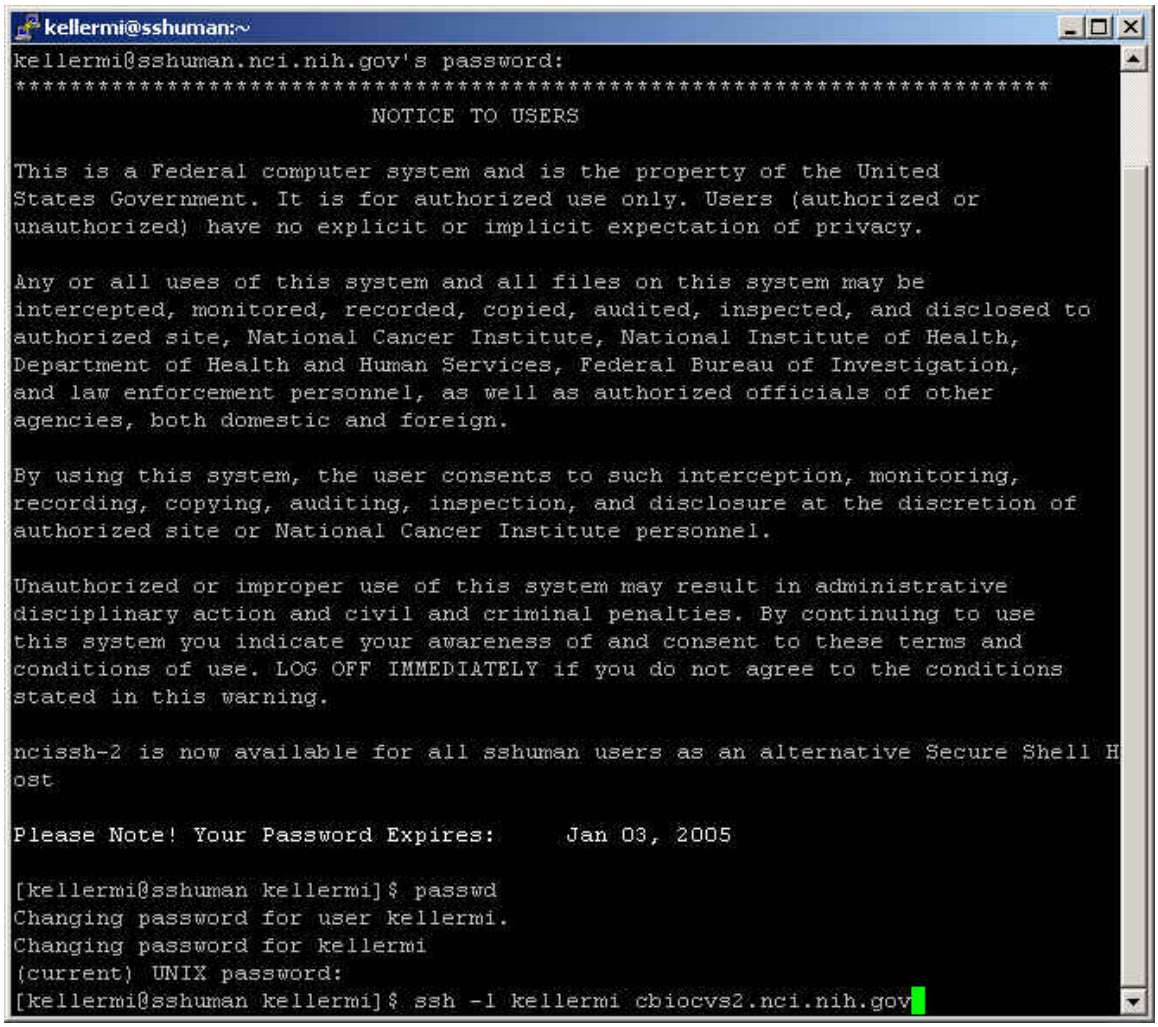


Figure 21 - Connecting to cbiocvs2.nci.nih.gov

Enter login ID as prompted
Enter password as prompted

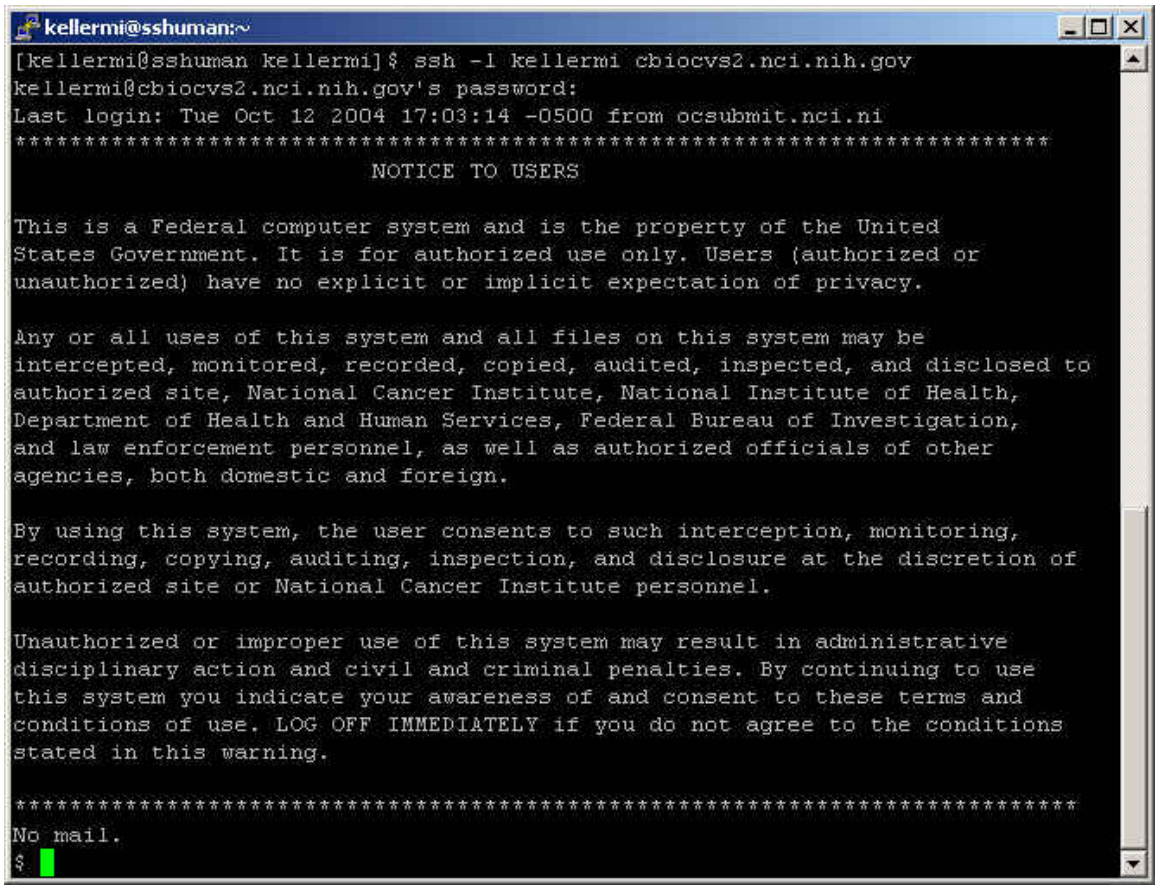


Figure 22 - Connected to cbiocvs2.nci.nih.gov

Type in “passwd” command, hit enter key and follow prompts to change password

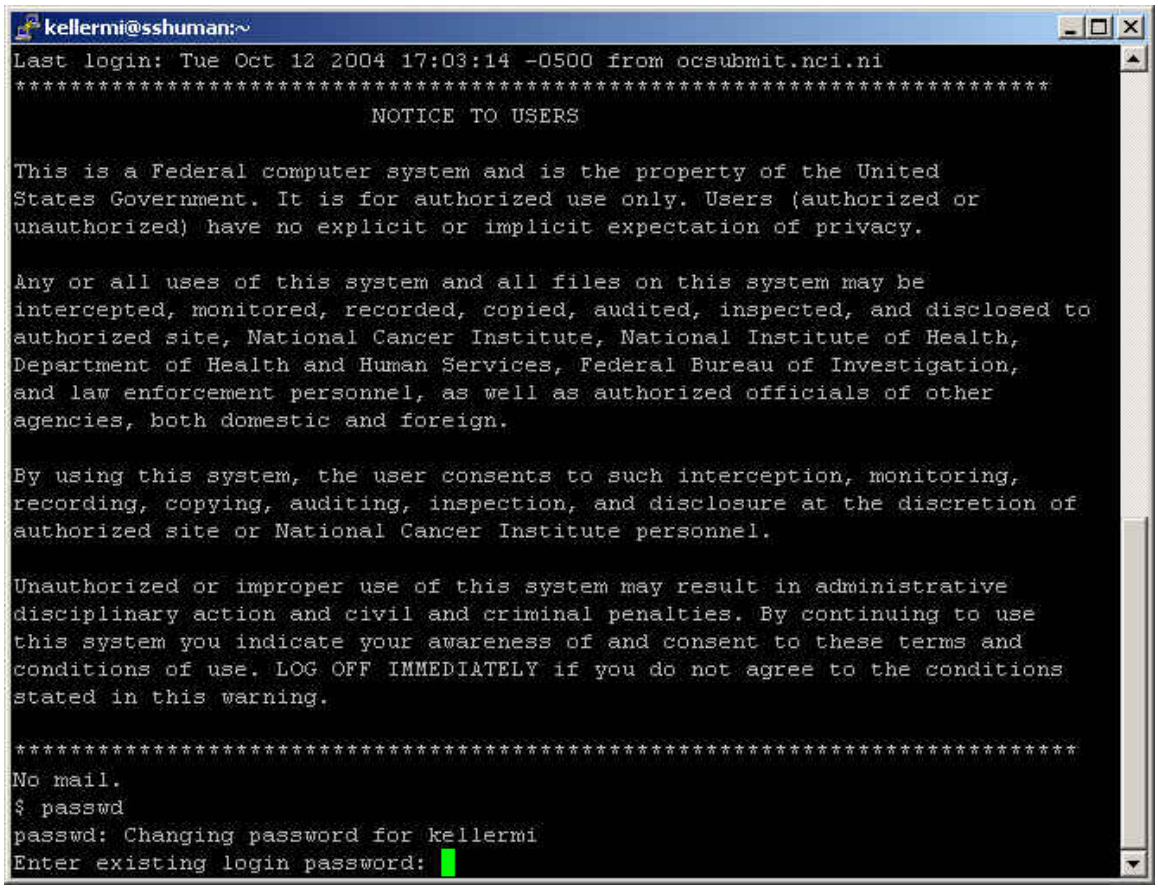


Figure 23 - Changing password on cbiocvs2

Additional Methods to Connect to CVS

Using with a CVS command line client

1. With PuTTY started, the tunnel through sshuman established and logged in to cbiocvs2 as previously described, use the –d option to the cvs command to specify the cvsroot:

```
>cvs -d :pserver:<username>@localhost:22401<path>
```

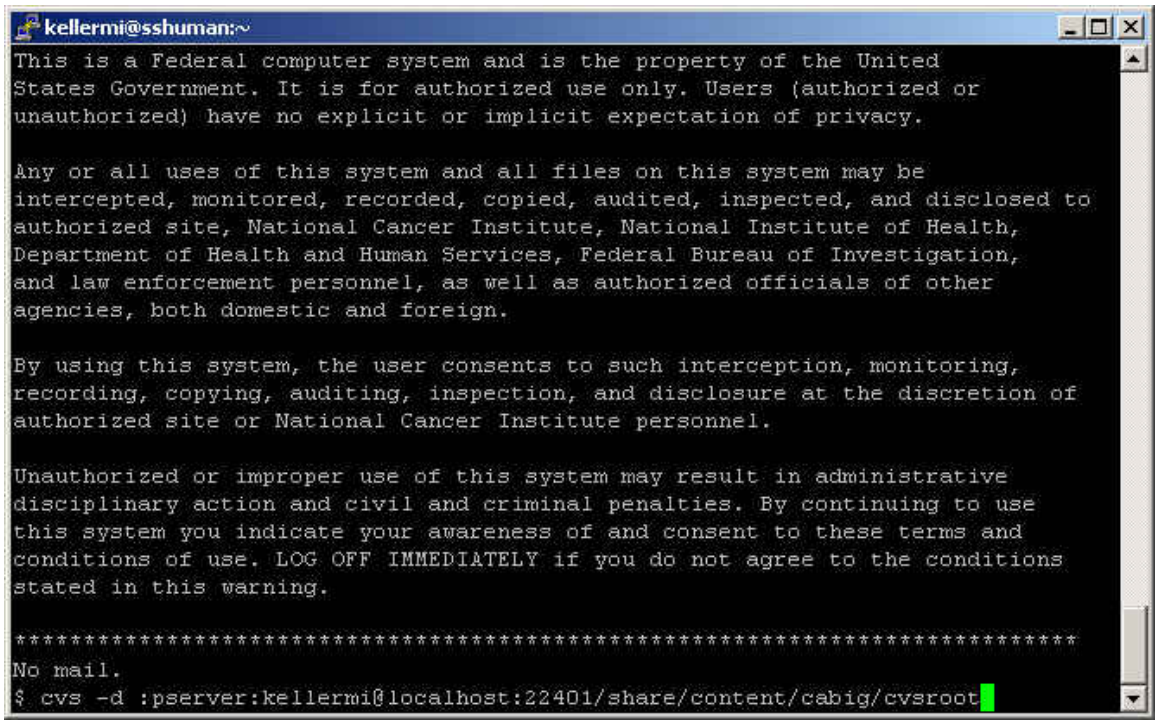
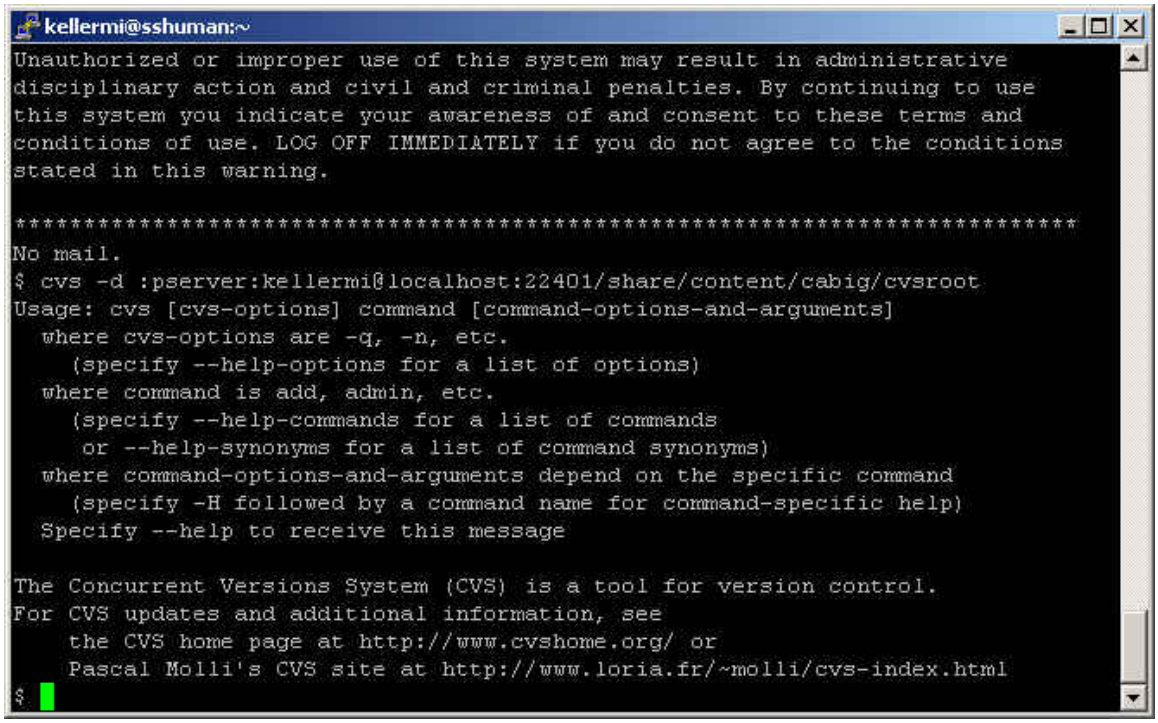


Figure 24 - Command line connection to CVS

2. You are now enabled to perform CVS commands from the command line.



Alternatively, you could create an environment variable called CVSROOT with the connection string above. Note that there is no colon between the port and the path. For 5-digit ports, you must not separate the port and path with a colon, although it is required if the port is not included or only has 4 digits. This seems to be a problem with the way CVS parses CVSROOTs.

Using with TortoiseCVS

Configuring TortoiseCVS is a simple matter of entering the connection information into the text boxes supplied. Alternatively, you can simply type the entire connection string into the CVSROOT text box. Again, keep in mind that you should not include a colon after a 5-digit port. The user name here is your username on cbiocvs2, not on your local machine.

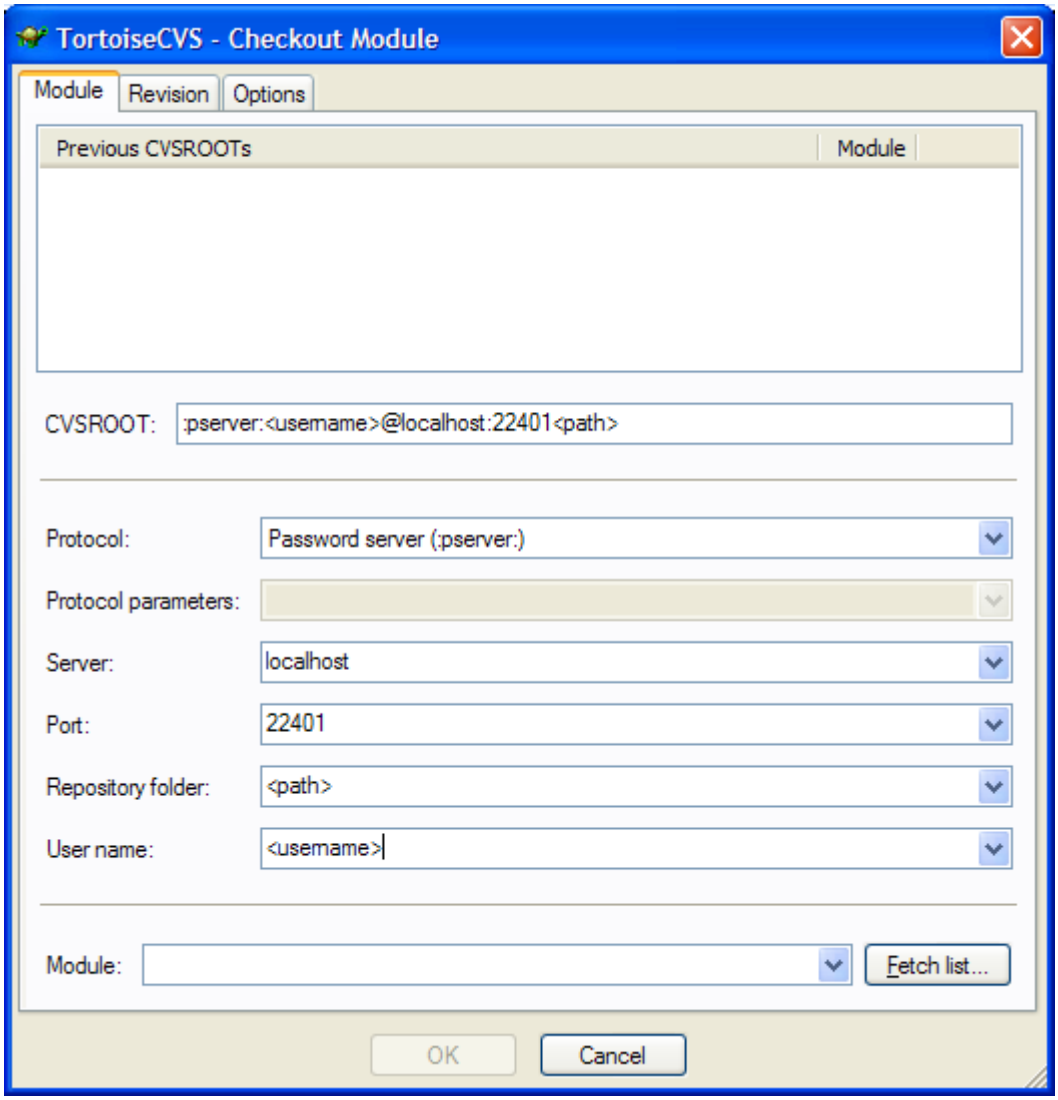


Figure 25 - Configuring TortoiseCVS

Using with Eclipse 3.0

Within Eclipse, open up the CVS Repository Browsing Perspective (Window → Open Perspective → Other → CVS Repository Exploring). On the CVS Repositories tab, right-click and select New → Repository Location. Enter the repository information in the appropriate locations. Please note that while all the examples here use port 22401, for all intents and purposes, any open port will do.

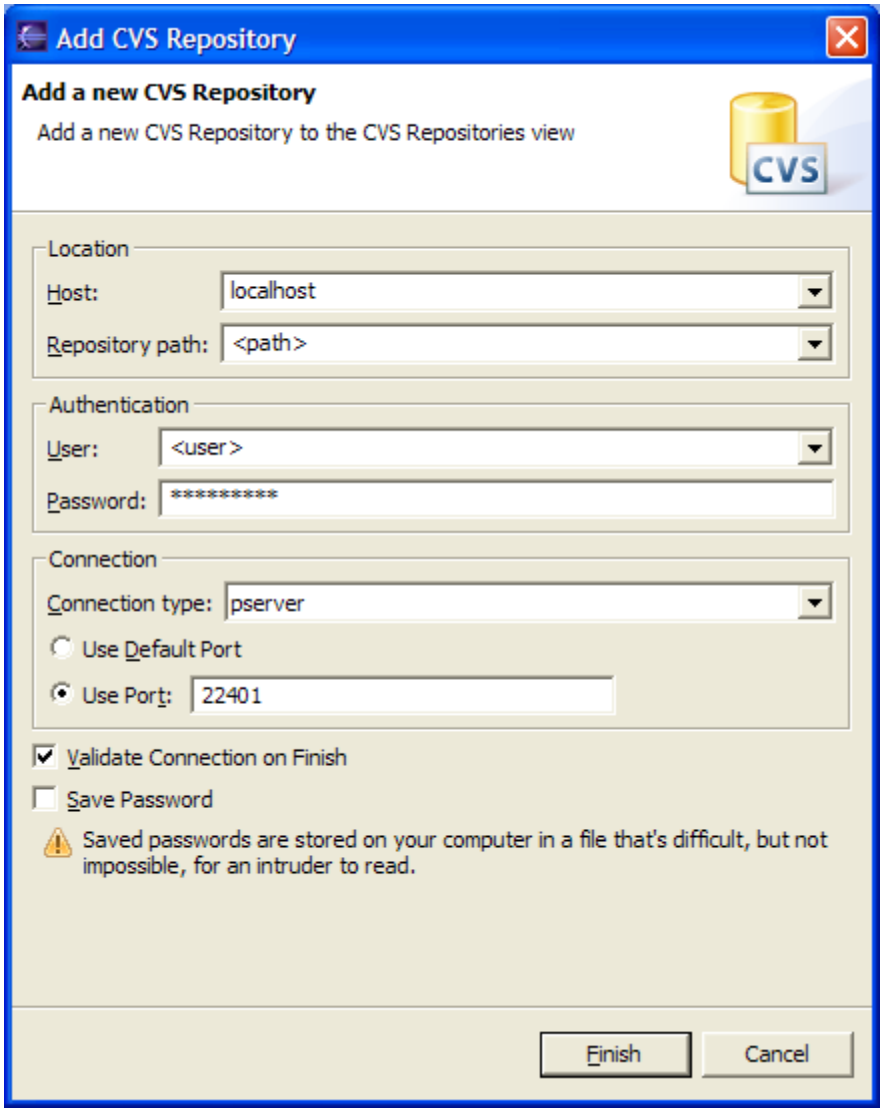


Figure 26 - Configuring Eclipse 3.0

Using with WinCVS

[Note that these instructions were tested with version 1.3.17.2 Beta 17 (build 2), but should work with other versions as well.]

Because of the way WinCVS manages CVSROOT information, it is necessary to 'trick' it into accepting the proper settings to connect to your repository. Note, for example, that the port information gets included as part of the path. It is possible to set the port via the 'Settings' dialog, but that doesn't seem to work correctly for 5-digit port numbers. The point of this exercise is to get the appropriate CVROOT to appear in the CVSROOT box at the bottom of the dialog.

Select Admin → Preferences, and enter the necessary information in the dialog boxes below. Again, note that the port you selected above should be included as part of the path, and if you selected a 5-digit port, **do not separate the port from the path with a colon**.

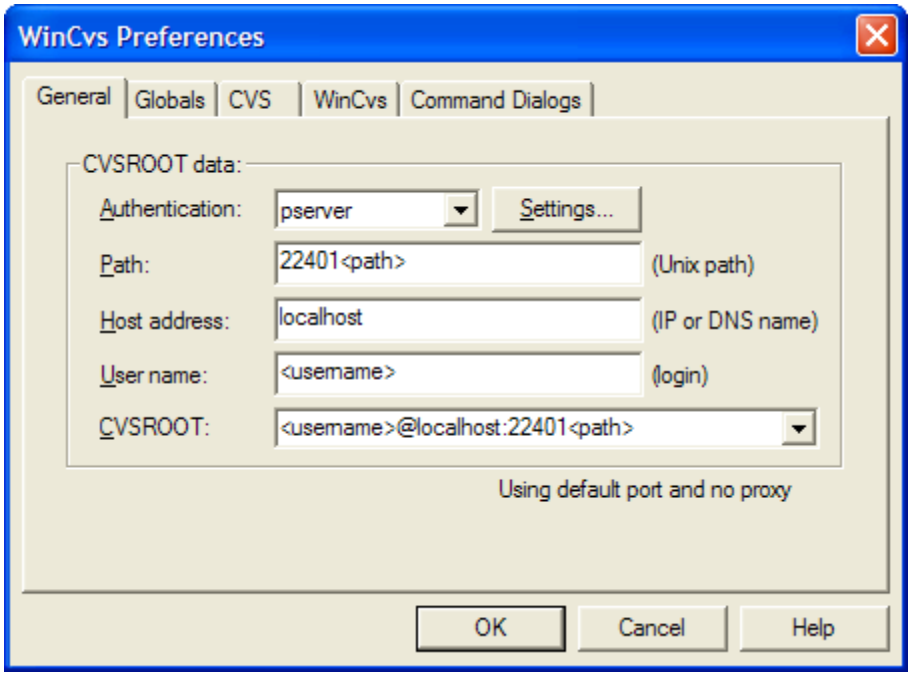


Figure 27 - Configuring WinCVS